

POISON CENTRE ROUND

Ahmed M. Solyman

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

..

حضر- آت السـ آدة الأفاضـ ل
الفايـ ل دا تجميعـة بسيطة لـراوند

Poison Centre

مع بعض الأسئلة بتـ آعت الراوند
وصور الأدوية وكـ ل

Charts

اللى علينا

فاضل بس تذاكروا اول 20 صفحة بتوع

General Toxo

Let's Rock IT !

البداية شوية كلام ازاي تكتب شيت

AIM OF TAKING HISTORY ?

- Name of poison?
- Amount of poison?
- Time pass since intake? → affect management

CIRCUMSTANCE

ازای ممکن المریض یتسمم !

- Mainly SUICIDAL ~ especially female
- 25% accidental ~children
- 1 % homicidal
- Rest : OVERDOSE

Access level of
consciousness



MATTHEW AND
LAWSON SCALE (M& L)
-specific for toxicological
coma

GLASGOW COMA
SCALE (GCS)

دی لازم تتحفظ ضروری
بیبجي علیها سؤال لازم

Matthew and lawson scale

0



Conscious patient

1



Drowsy + respond to verbal command

2



Unconscious + respond to minimal
painful stimuli
Reflex intact

3



Unconscious + respond to MAX painful
stimuli
NO superficial R + sluggish deep R

4



NO RESPONSE

- Most severe ? : 3 & 4

GLASGOW COMA SCALE

	Patient response	Score
I. Eye opening:	- Open eyes on own	4
	- Open eyes when asked	3
	- Open eyes to pain	2
	- Not open eyes	1
II. Motor response:	- Obey commands	6
	- Push examiner's hand away when pinched <i>عنده قوة - يرفا</i>	5
	- Pulls a part of body away when pinched <i>يدوب - يشد جسمه</i>	4
	- Flexion response to pain	3
	- Extension in response to pain	2
	- No motor response to pain	1
III. Verbal response	- Oriented	5
	- Disoriented (confused)	4
	- Inappropriate <u>words</u>	3
	- Incomprehensible <u>sounds</u>	2
	- None	1

Decorticated posture

Decerebrated posture

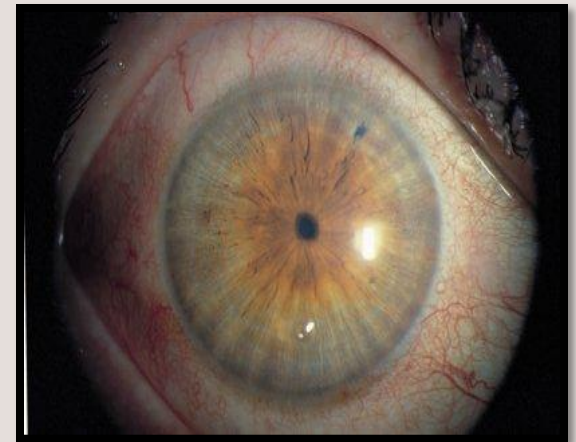
لازم بييجي عليها سوال في الامتحان

QUESTIONS?

- What is score of patient?
- Comment/ severity ??
 - ✓ 3-8 : severe
 - ✓ 9-12 : moderate
 - ✓ 13-15 : mild

THE EYE

Mydriasis (> 8mm)		Myosis Constricted Pupil	Pin point pupil
Sympathomimetic	REACTIVE	Cholinergic	Phenothiazine (a-adrenergic blokage)
anticholinergic	FIXED	Chloral hydrate	opiod
Cyanide (hypoxia)		Carbolic acid	organophosphorus
		Early in barbiturate	
		Ergot	



MOUTH EXAMINATION

- Salivation
- Cyanosis – blue tongue
- Corrosive burn



- ☒ Strong acid and alkali (give example of acid/alkali)
- Characteristic odour
 - ☒ Kerosene
 - ☒ Alcohol
 - ☒ Cyanide
 - ☒ organophosphorus

CYANOSIS

✓ Salicylate –suppress respiratory centre

✓ Barbiturate

✓ Opioid



CNS and respiratory depressant

SKIN

- Dry : atropine
- Wet : alcohol
- Red/pink skin
 - Carbon monoxide poisoning
 - Cyanide poisoning
- Bullae
 - Barbiturate
 - Carbon monoxide poisoning





Skin Bullae

Due to Carbon Monoxide or Barbiturate Poisoning

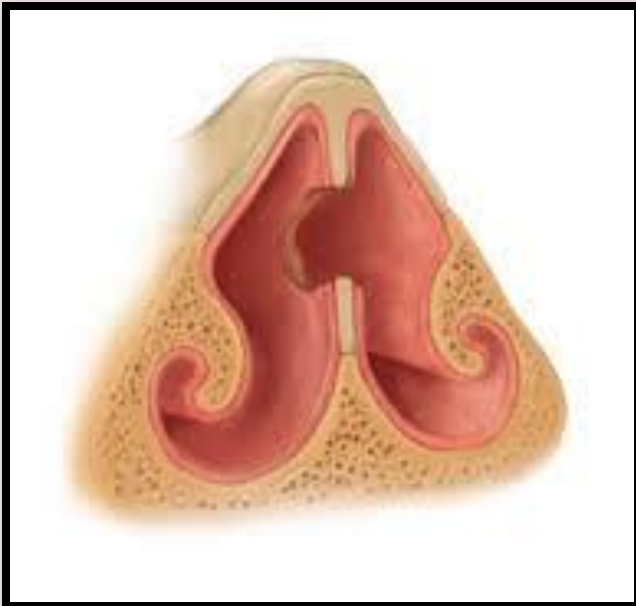


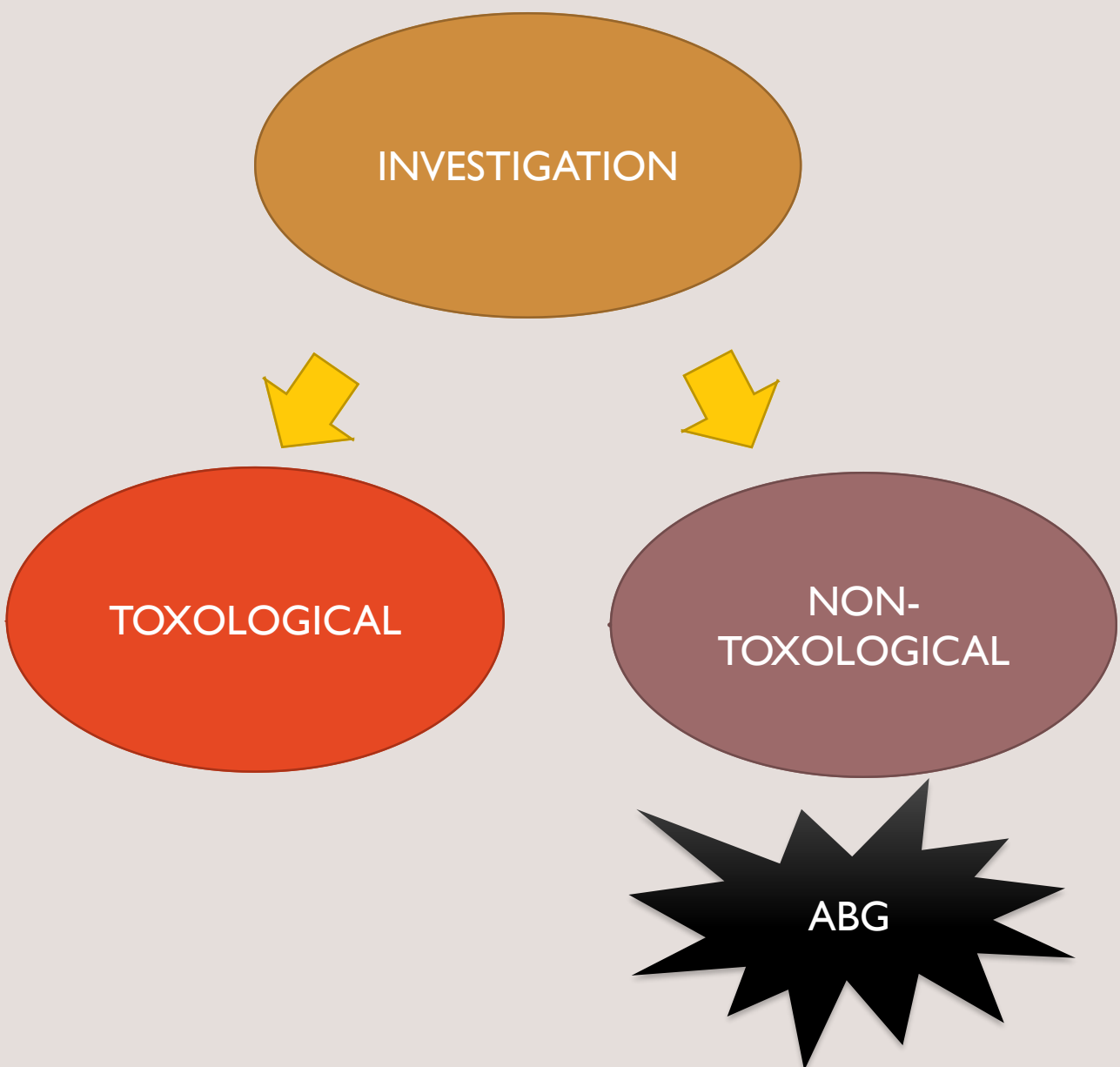
Cherry red skin color

Due to carbon monoxide or cyanide poisoning

• **NASAL SEPTUM PERFORATION**

- Cocaine
 -
 - Heroin
- Dilated Reactive PUPIL
- prolonged abused (Sniffing)
- Pin Point PUPIL





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graph TD; A([INVESTIGATION]) --> B([TOXOLOGICAL]); A --> C([NON-TOXOLOGICAL]); C --> D{{ABG}}
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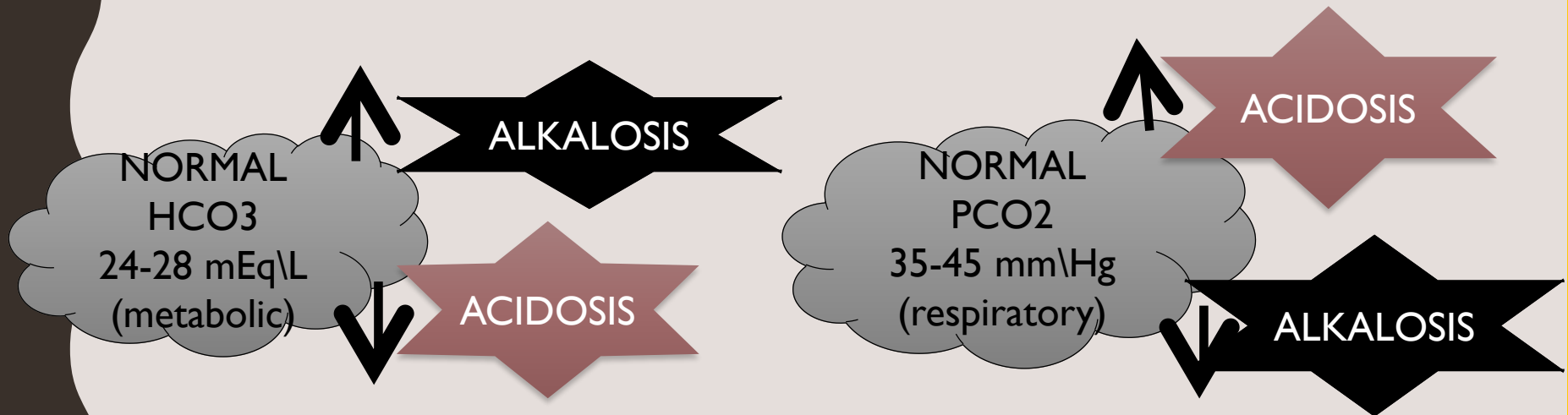
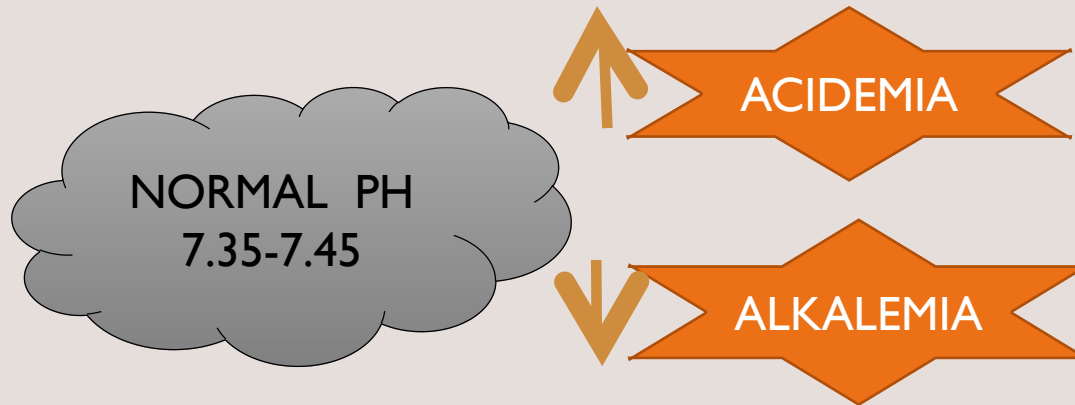
INVESTIGATION

TOXOLOGICAL

NON-
TOXOLOGICAL

ABG

ARTERIAL BLOOD GASES



NORMAL ARTERIAL BLOOD GASES

pH 7.35 -7.45

<7.35 Acidemia

>7.45 Alkalemia

PaO₂=80-100mmHg

<80mmHg Hypoxemia

PaCo₂ =35-45 mmHg

<35 mmHg (**Respiratory alkalosis**)

>45 mmHg (**Respiratory Acidosis**)

HCO₃=24-28 mEq/liter

<24 mEq/ liter (**Metabolic acidosis**)

>28 mEq/ liter (**Metabolic alkalosis**)

QUESTIONS - 1

PH : 7.3

PACO₂ : 50

PAO₂ : > 100

HCO₃ : 25

Result : uncorrected respiratory acidosis

Comment on each item,

☒ Normal / not : acidosis/alkalosis/acidemia..

☒ Why : ..because normal value is

QUESTIONS - 2

- PH : < 7.35
- PACO₂ : normal
- HCO₃ : < 24
- RESULT : uncompensated metabolic acidosis

QUESTIONS - 3

- PH : > 7.45
- PACO₂ : normal
- HCO₃ : > 28
- RESULT : uncompensated metabolic alkalosis

QUESTIONS - 4

- PH : < 7.35
- PACO₂ : > 45
- HCO₃ : normal
- RESULT : uncompensated respiratory acidosis

QUESTIONS - 5

- PH : > 7.45
- PACO₂ : < 35
- HCO₃ : normal
- RESULT : uncompensated respiratory alkalosis

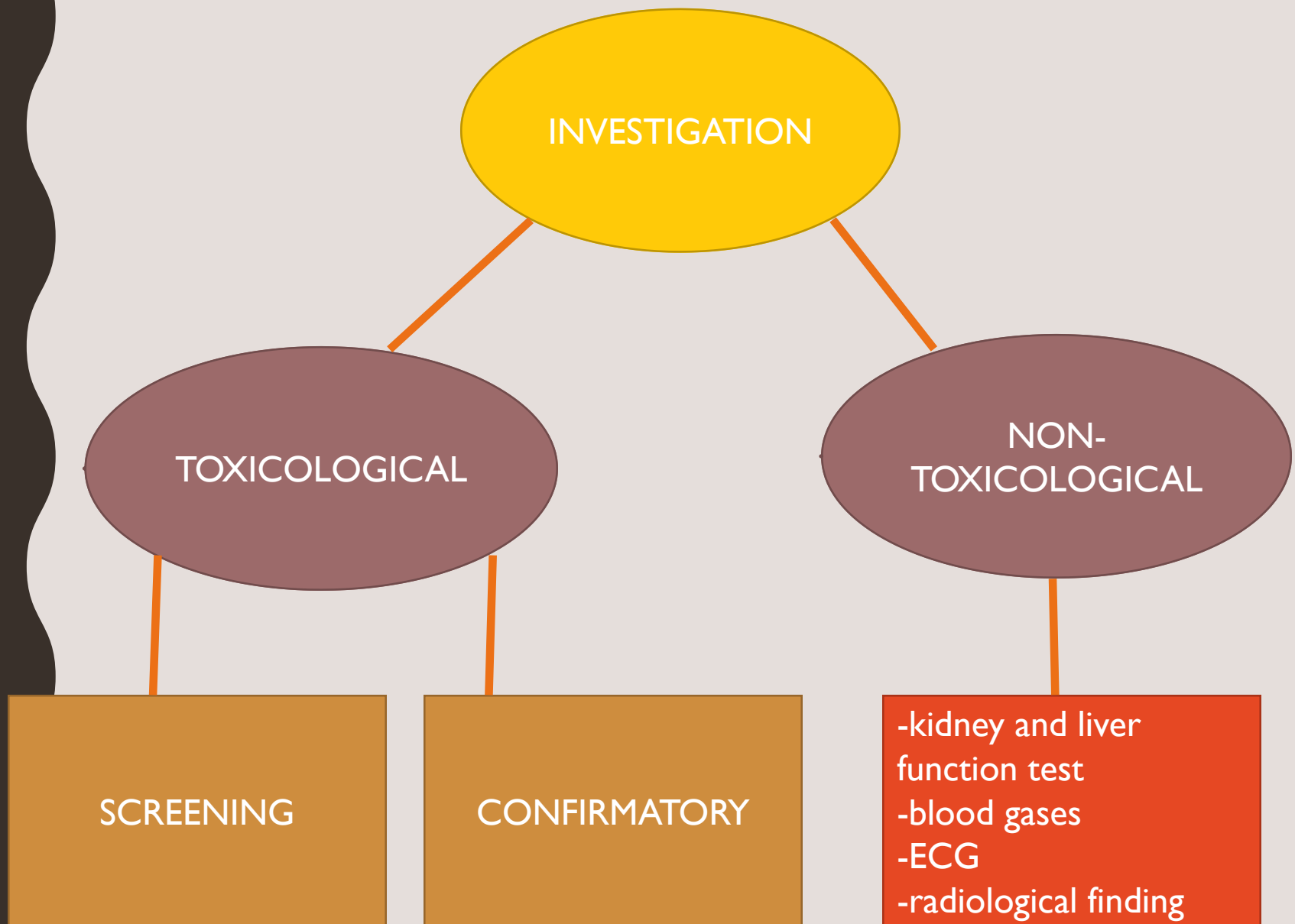
SALICYLATE & THEOPHYLLINE

- PH : **normal**
- PACO₂ : < 35
- HCO₃ : < 24
- Hyperventilation → respiratory alkalosis
- ✓ bicarbonate (compensated by kidney) → metabolic acidosis
- RESULT : corrected respiratory alkalosis + metabolic acidosis

خلوآ بالكم
الأدوية الاتين اللي فوق دول بس
هما اللي بيقدروآ يظبطوا الدنيآ

RESPIRATORY FAILURE

- Definition : PAO_2 less than 60 and PACO_2 more than 50 (respiratory failure diagnose by the value above)
- Given case :
 - ☒ $\text{PAO}_2 < 60$
 - ☒ $\text{PACO}_2 > 50$
- Question : respiratory failure or not ?
- Need hand & mechanical ventilation .



SCREENING TEST

- Colour test
- Spectrophotometry

-uses : to measure cholinesterase enzyme activity in case of cholinesterase enzyme inhibitor insecticide

Etc : organophosphorus and carbamate

- Immunological method :

1) RIA

2) Enzyme Multiplied Immunoassay Technique (EMIT) : detection many drug of abuse

- Chromatography (TLC)

SPECTROPHOTOMETER



EMIT



CONFIRMATORY TEST

- Gas chromatography (GC) .
- High Pressure Liquid Chromatography (HPLC) .
- Gas chromatography with mass spectrometry (GC\MS) **IS THE MOST SENSITIVE AND RELIABLE METHOD** .
- Atomic absorption spectrophotometer AAS : detection of heavy metals.

HPLC



AAS



RADIOLOGICAL FINDING

- GIT (3 pictures)

Kerosene – Radio opaque shadow – Body Packers

- CT BRAIN (2 pictures)

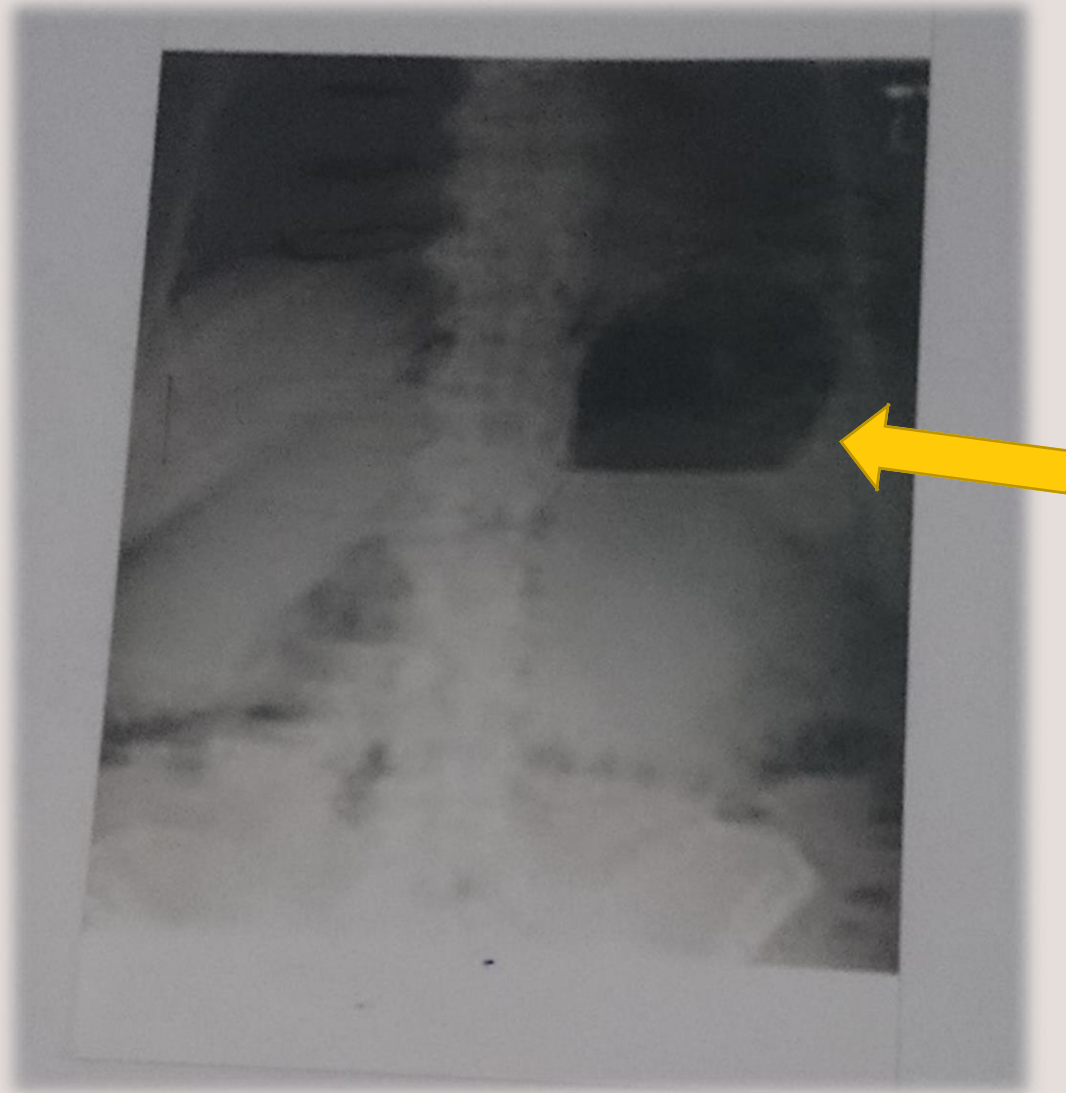
Intraventricular Hemorrhage – Diffuse cerebral edema

- Lead line (2 pictures)

Knee – Hand & wrist

وصلنا هنا بقا للأشعة
ممکن یجیبلی صور ویسألنی ایہ دی

GIT

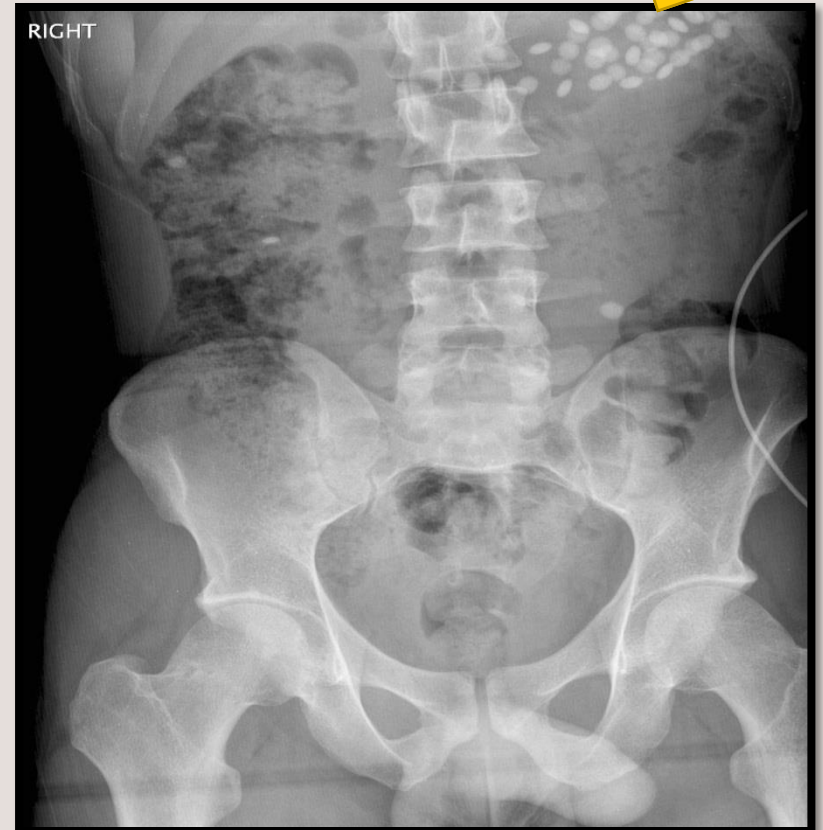


plain X-ray abdomen showing fluid level in the stomach, suggesting kerosene poisoning

Comment : plain X-ray abdomen showing Radiopaque shadow in the stomach

CHIPES (write each separately)

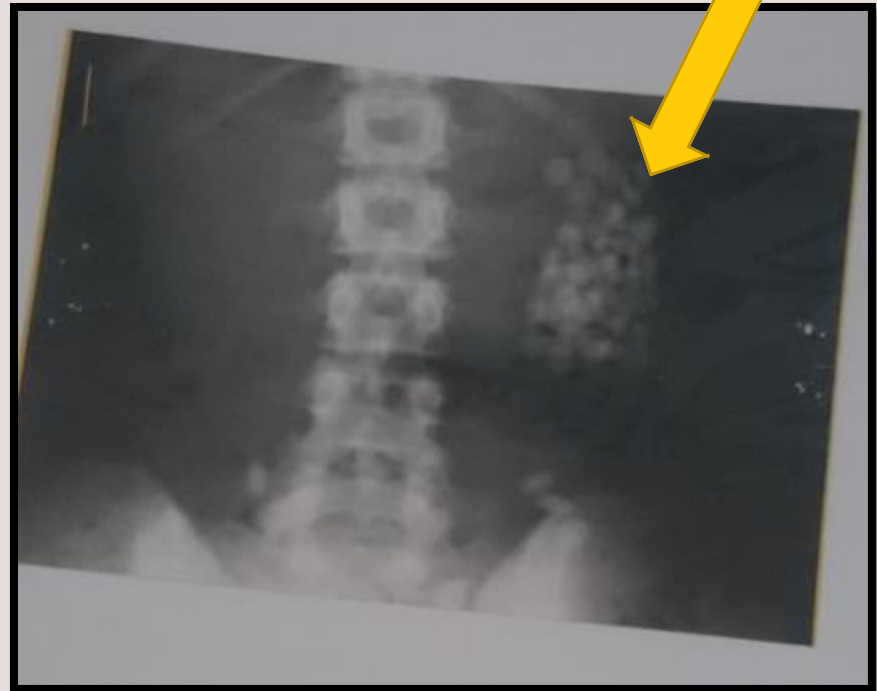
- chloral hydrate : use for Non-Barbiturate sedative hypnotic
- heavy metal
- iodine
- phenothiazine
- Enteric coated tablet
(aspirin)
- solvent



Comment : plain X-ray abdomen showing Radiopaque shadow in the stomach

CHIPES (write each separately)

- chloral hydrate : use for Non-Barbiturate sedative hypnotic
- heavy metal
- iodine
- phenothiazine
- Enteric coated tablet (aspirin)
- solvent





Body packers for transportation of illicit drugs: Plain X-ray abdomen showing multiple oval to elongated radio-opaque foreign bodies (packets)

ممکن السلايد اللى فـ آآنت يقولك مين اللى بيتهرب بالطريقة دى هما اتنين

الكوكايين والهيروين

ونفرق ما بينهم ازاي ؟

عن طريق البيوبيـ لـ زى ما قولنا قبل كـ - ده

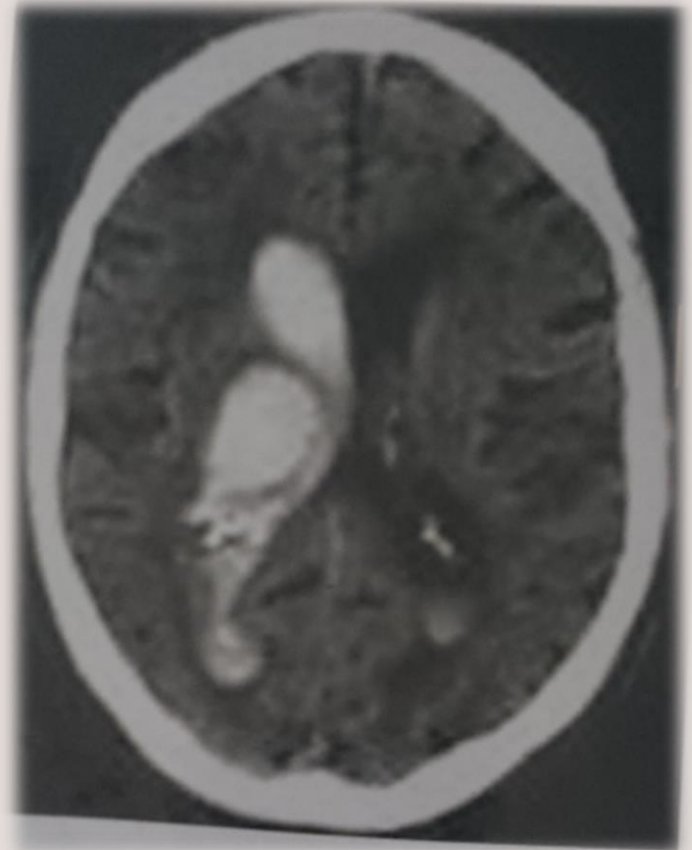
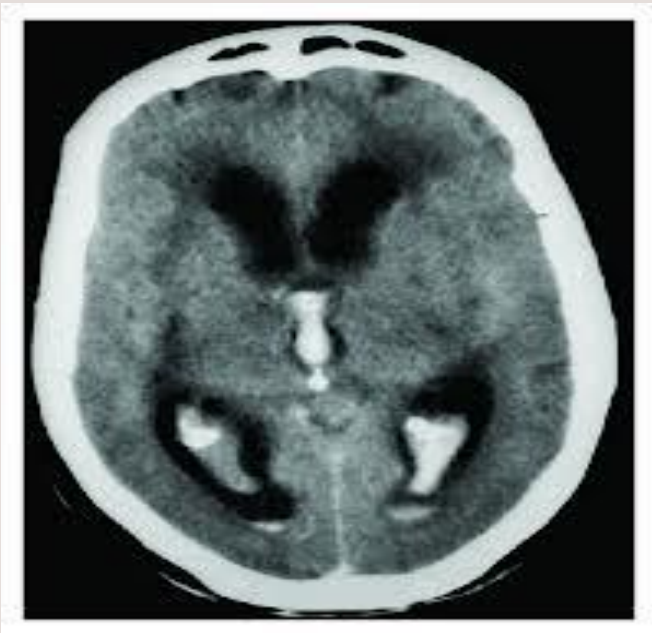
- Cocaine : Dilated Reactive PUPIL
- Heroin : Pin Point PUPIL

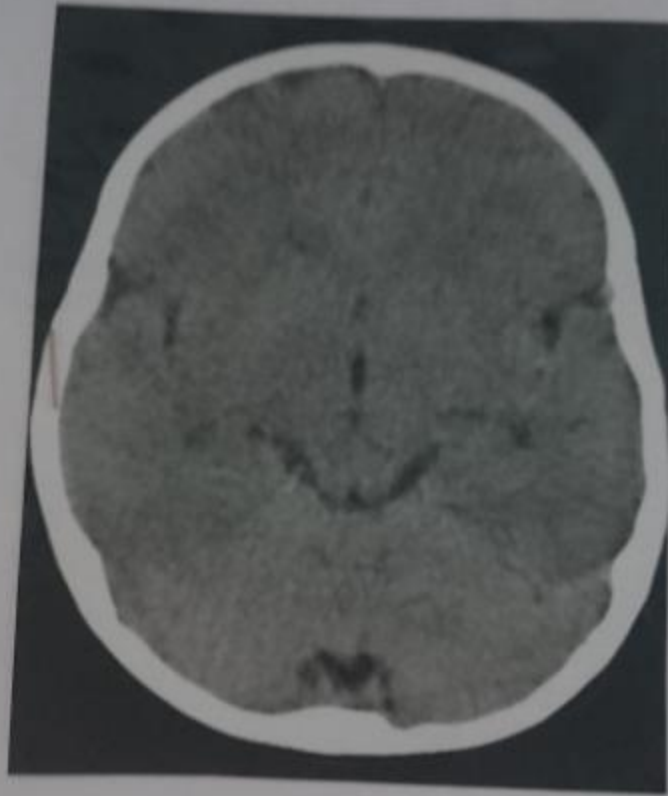
CT BRAIN

- CT brain showing intraventricular hemorrhage (hyperdense) due to CNS stimulants .

Causes ?

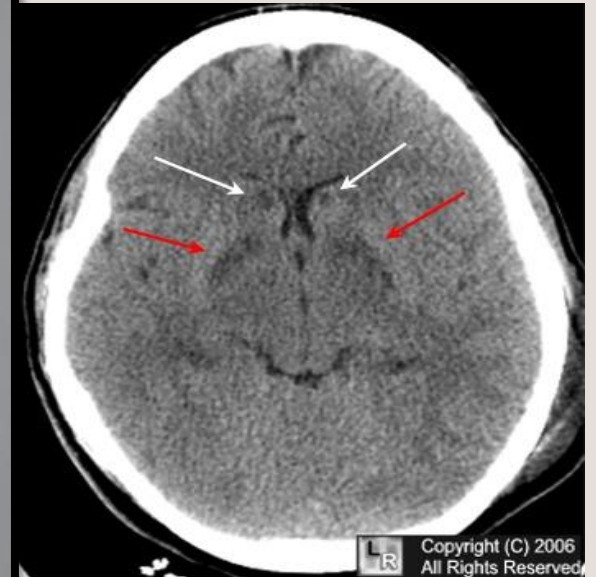
- **CNS stimulants** : Cocaine , amphetamine
(hypertension → rupture of blood vessel)





Diffuse Cerebral Edema

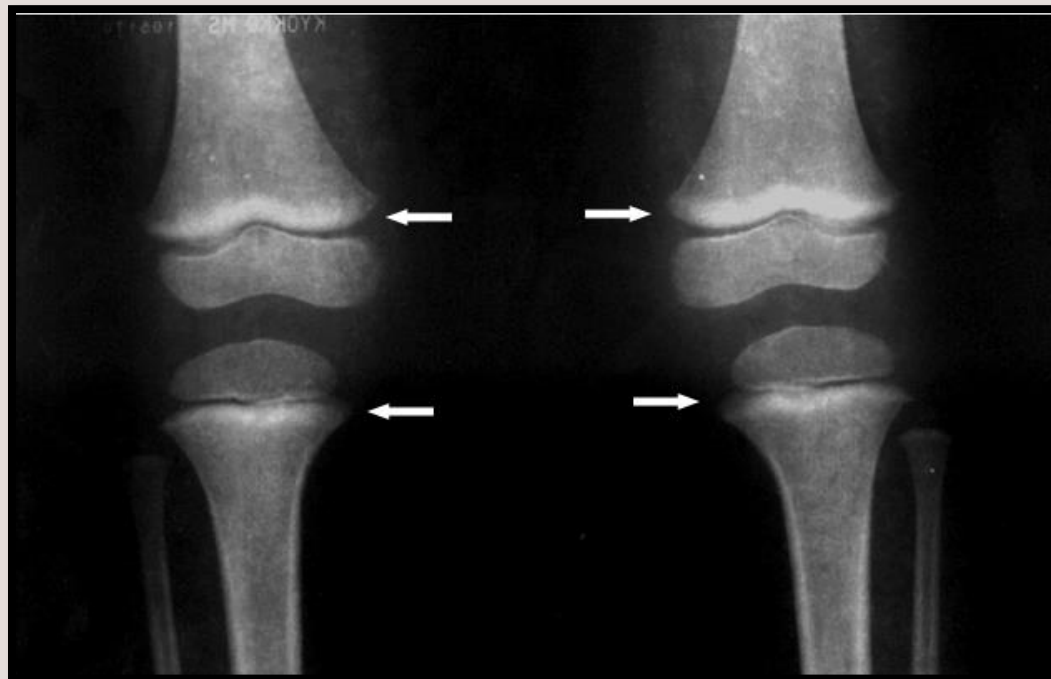
CT brain scan reveals diffuse effacement of the sulci and lateral ventricles and hypoattenuation of the brain parenchyma due to CO poisoning



LEAD LINE

- Comment : Chronic Lead poisoning (Lead lines)

-plain X-ray of knee showing transverse band of increase density in metaphysis of distal end of femur and proximal end of tibia and fibula





Chronic Lead Poisoning (Lead Lines):

X ray hand and wrist showing transverse bands of increased density at the metaphysis of distal ends of radius and ulna



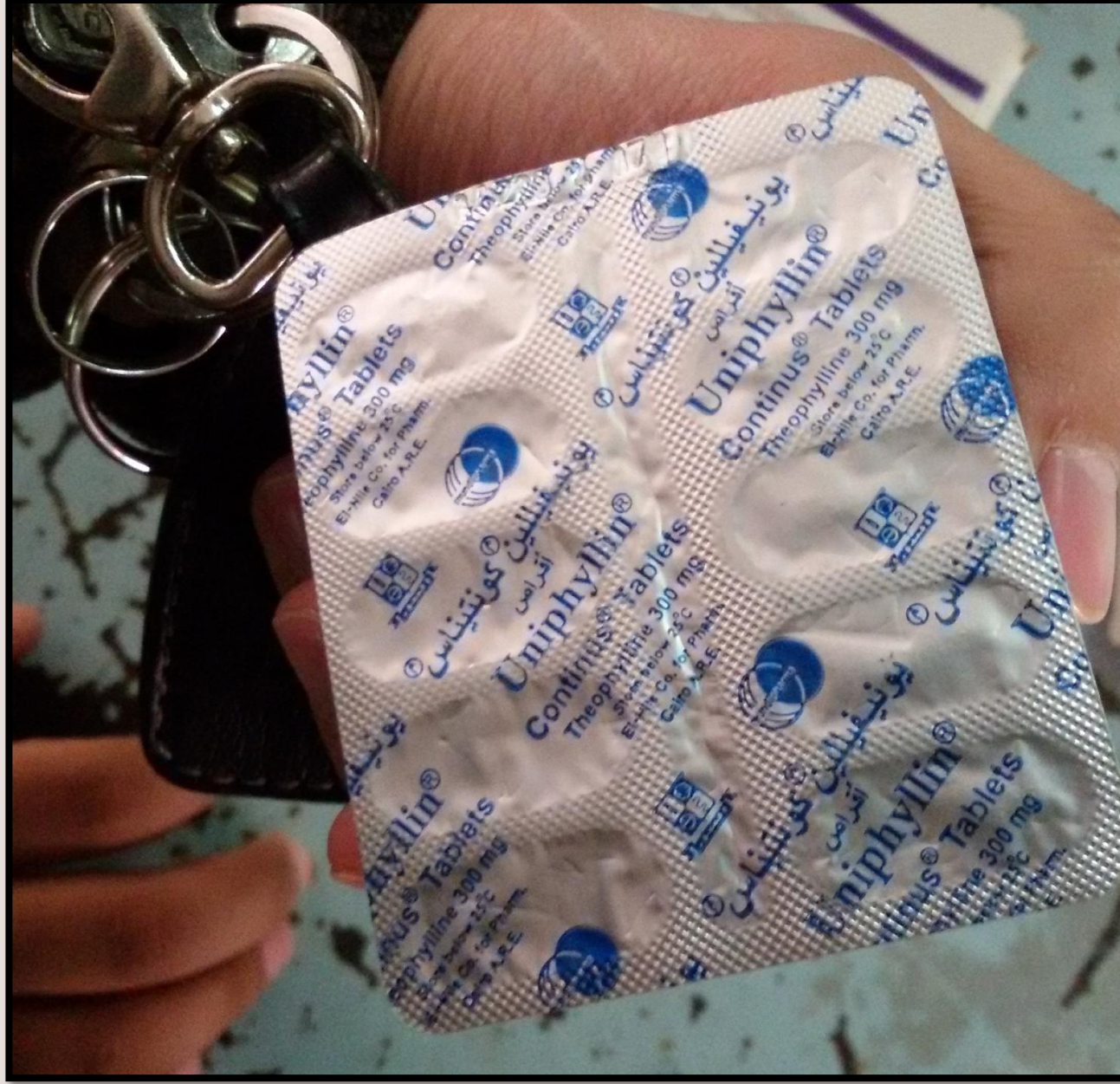
دلوقتى بقا هانخش على الحاجات
اللى ممكن تجيلنا
ويسأل عليها كام سؤال

AMPOULE OF THEOPHYLLINE

Questions?

❖ Clinical picture sympathetic toxidrome ?





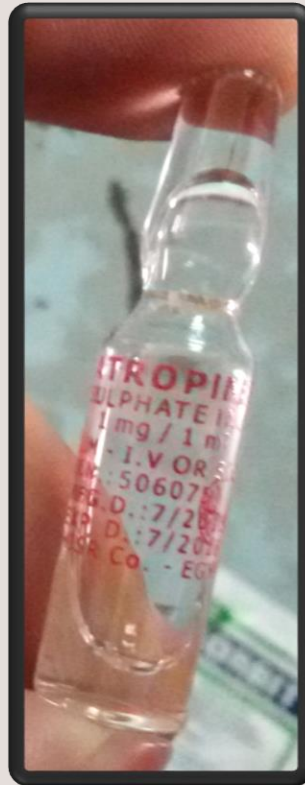
PHENOBARBITAL

- Sedative hypnotic pictures ?



AMPOULE OF ATROPINE [ANTICHOLINERGIC]

- Clinical pictures ?



CHLORPROMAZINE (ANTIPSYCHOTIC)

- Syndrome : Neuroleptic malignant syndrome (NMS)
- Sign : HAFTR
- Other antipsychotic drug : phenothiazine

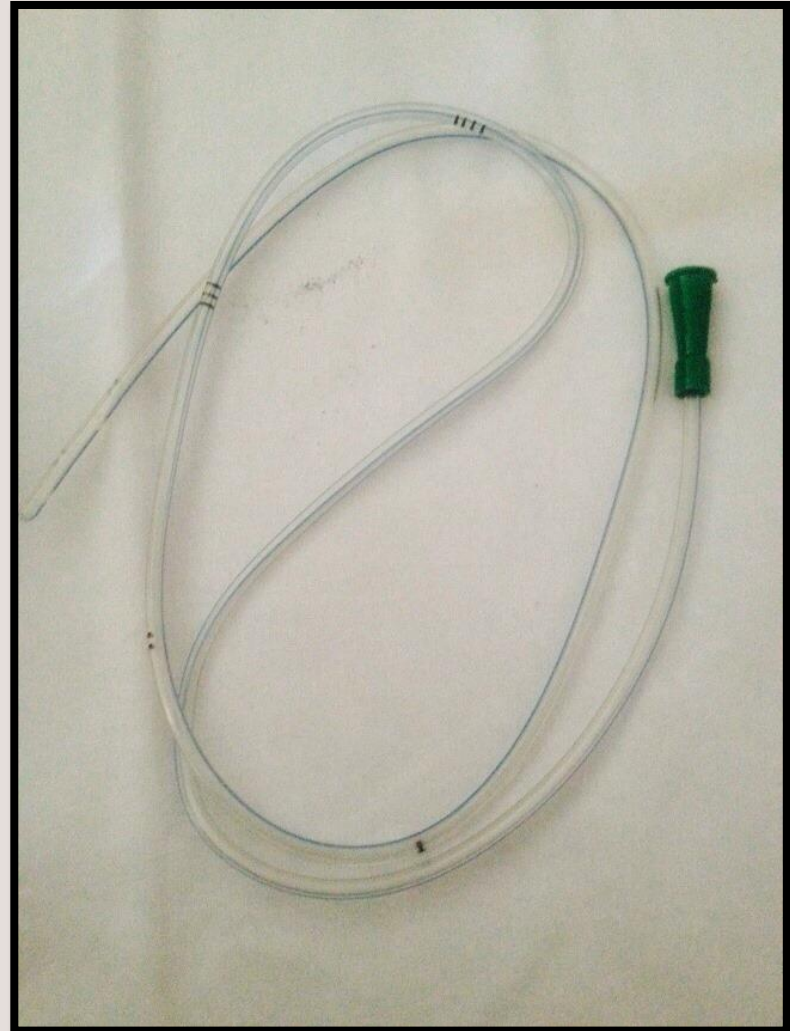


NASOGASTRIC TUBE

For Gastric lavage

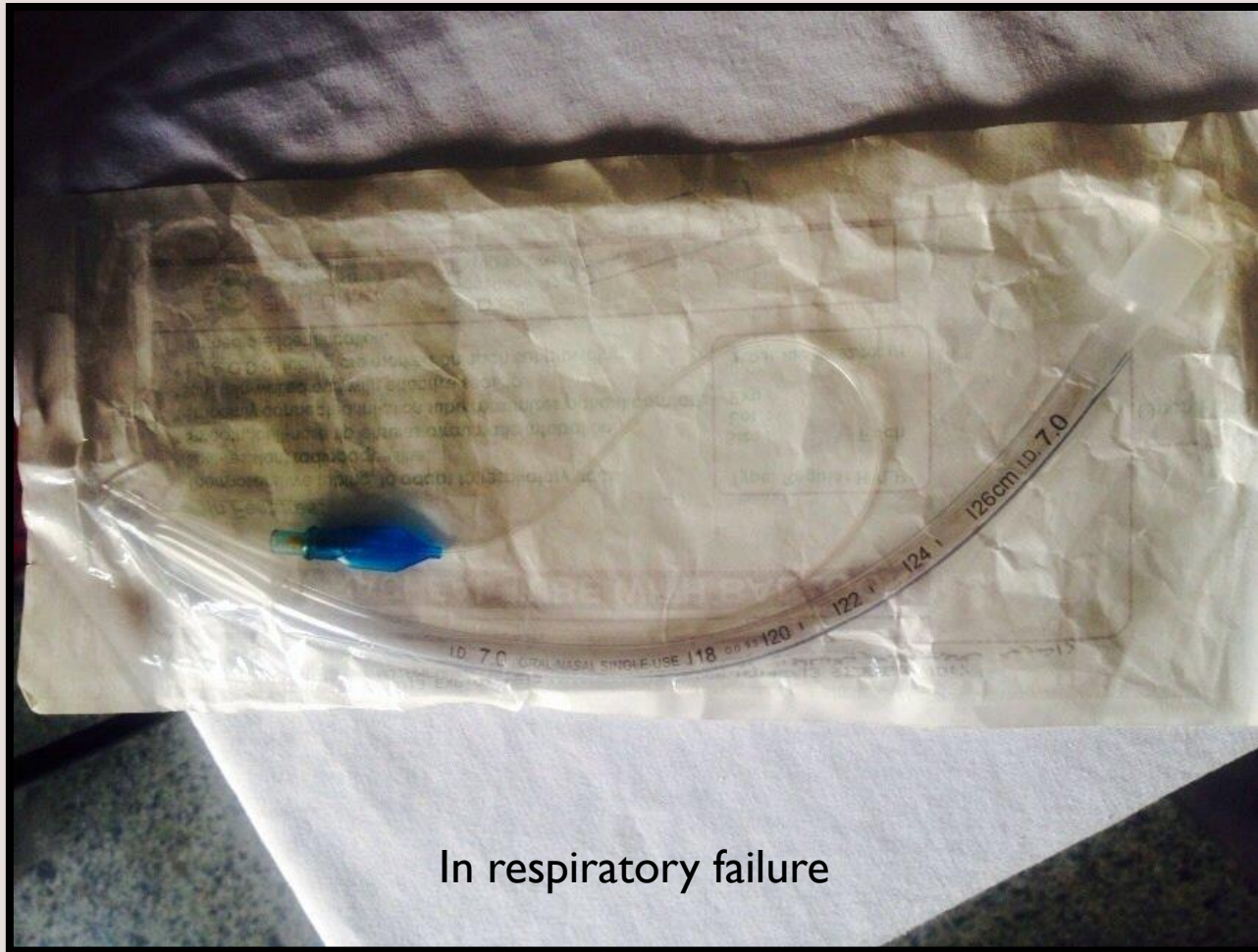
Other decontamination method ?

- Emesis
- cathartics



ENDOTRACHEAL TUBE

*SHORT & RIGID



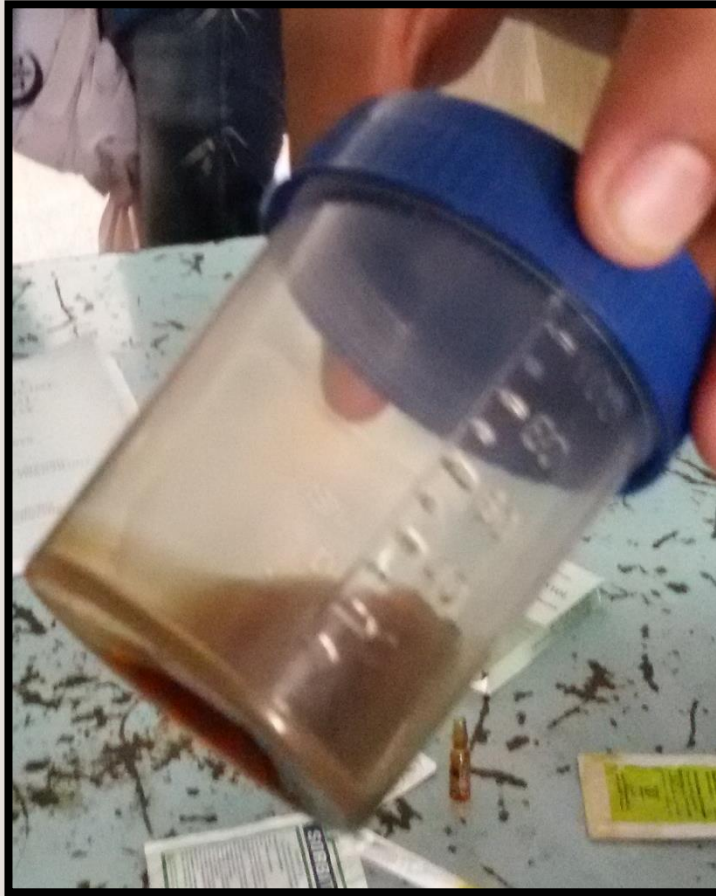
In respiratory failure

POWDERED ACTIVATED CHARCOAL

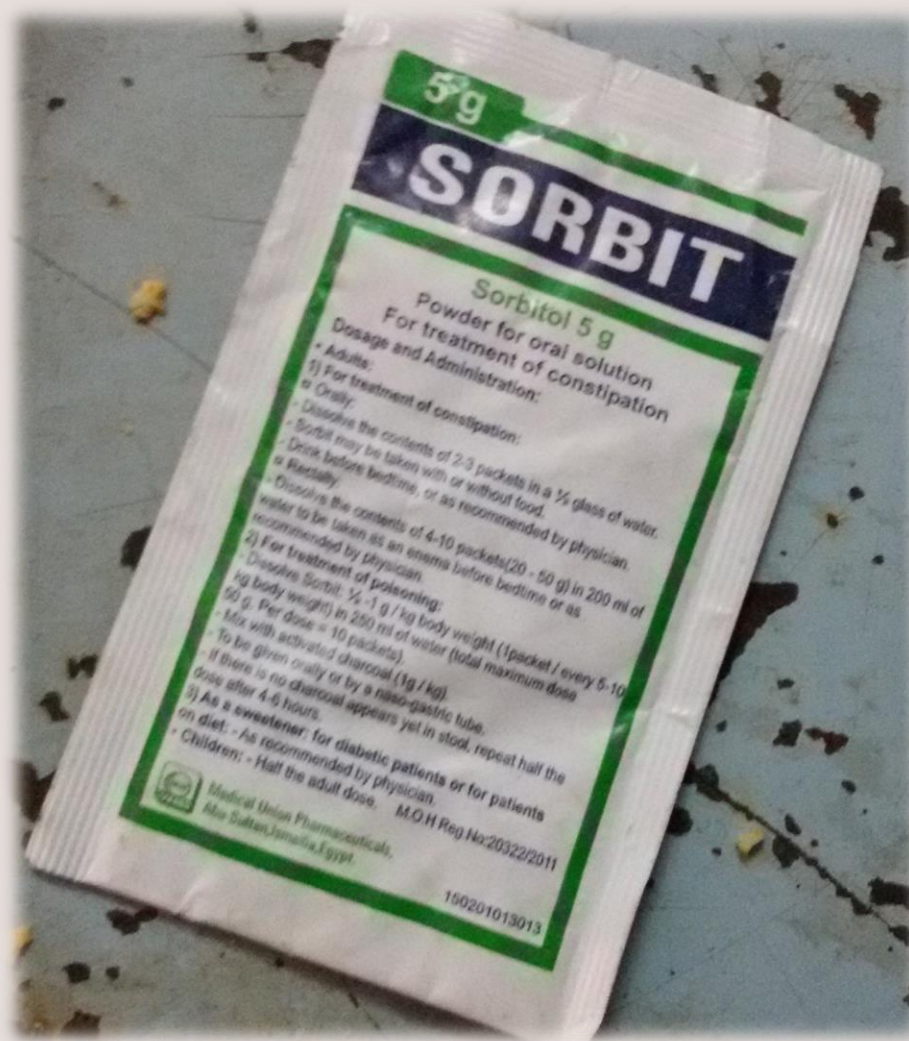
العلبة كلها مفحمة



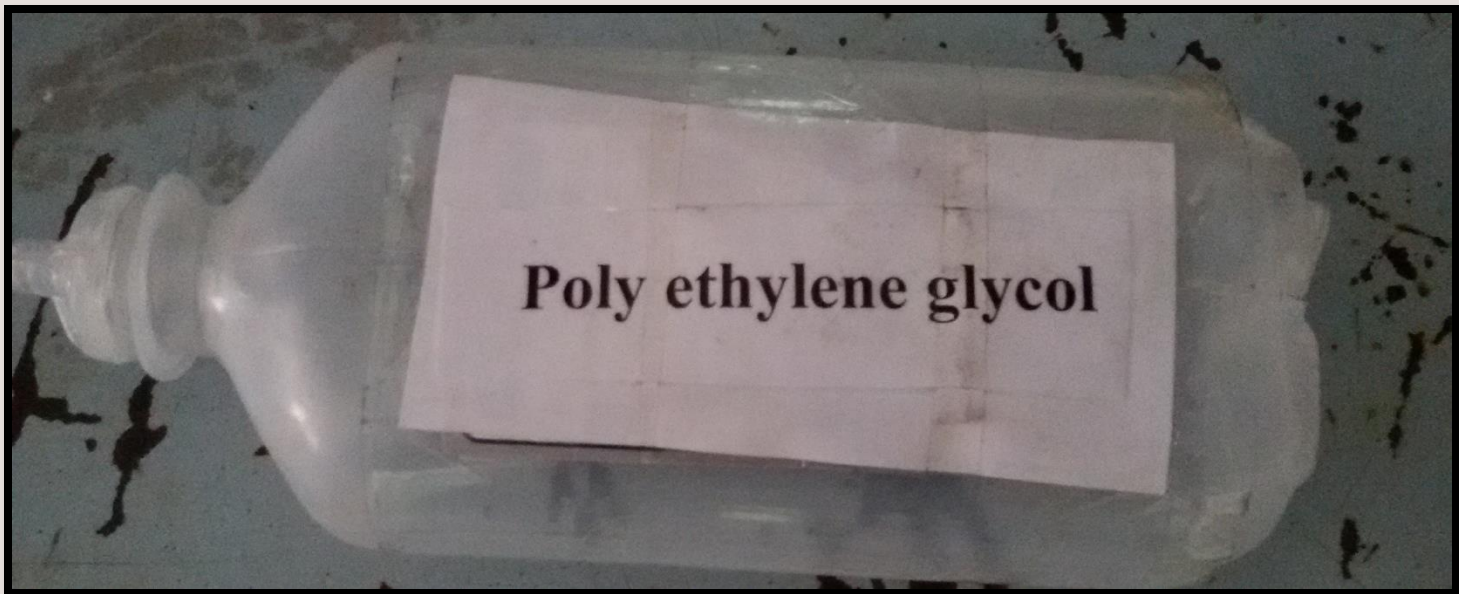
SYRUP OF IPECAC



CATHARTICS



Whole bowel irrigation



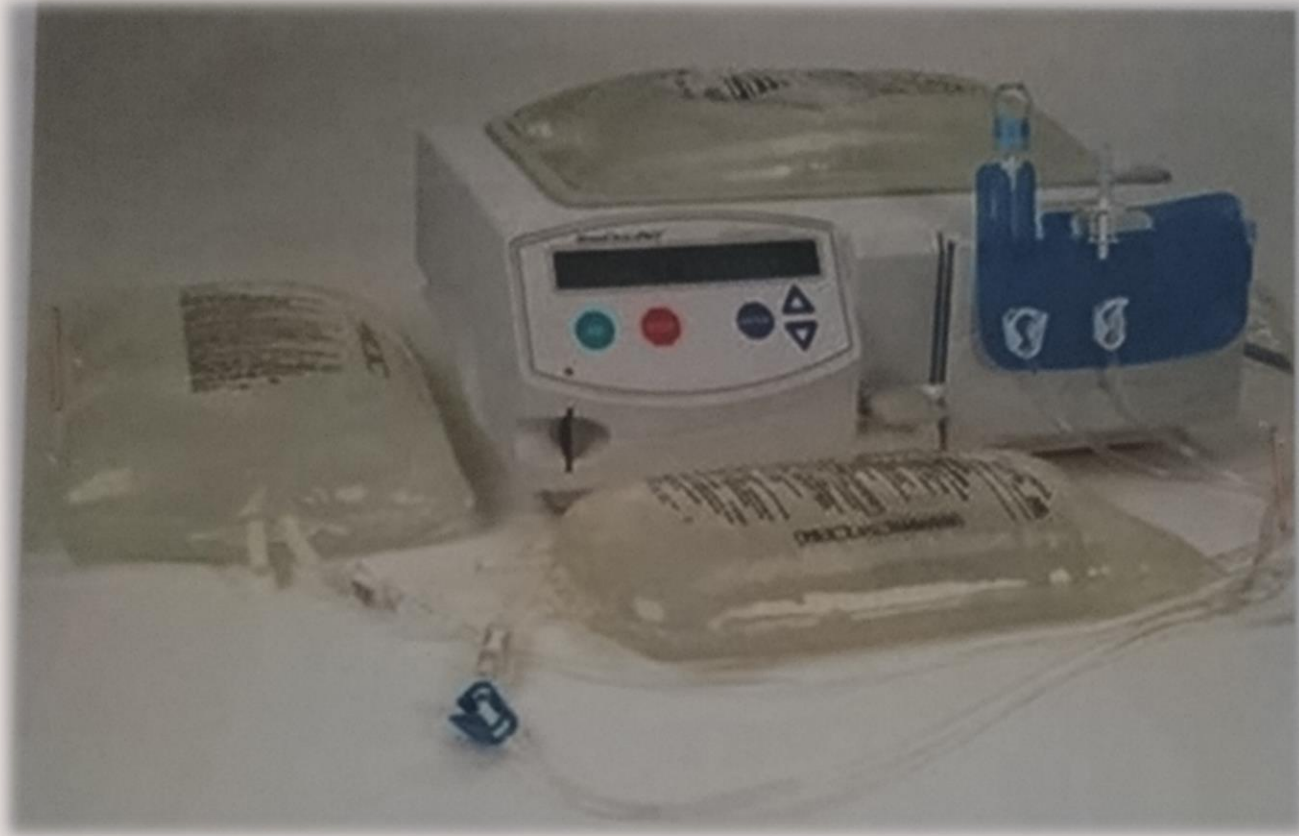
Sodium Bicarbonate :

- Treat metabolic acidosis .
- Chemical antidote to : salicylates , barbiturates , plant toxins , insecticides & alcohol .
- Treat arrhythmia of TCA .

احفظوا التجميعية دي بتاعت وظيفة الصوديوم بيك آرب



PERITONEAL DIALYSIS



HEMODIALYSIS



نعت ذر على بشد آعة الصورة بس بكل سهولة واحد نايم وموصل دراعه بجهاز بينقي الدم
يشبه جهاز البروفيسور عبع أطي كفت ه

xD

SPECIFIC ANTIDOTE

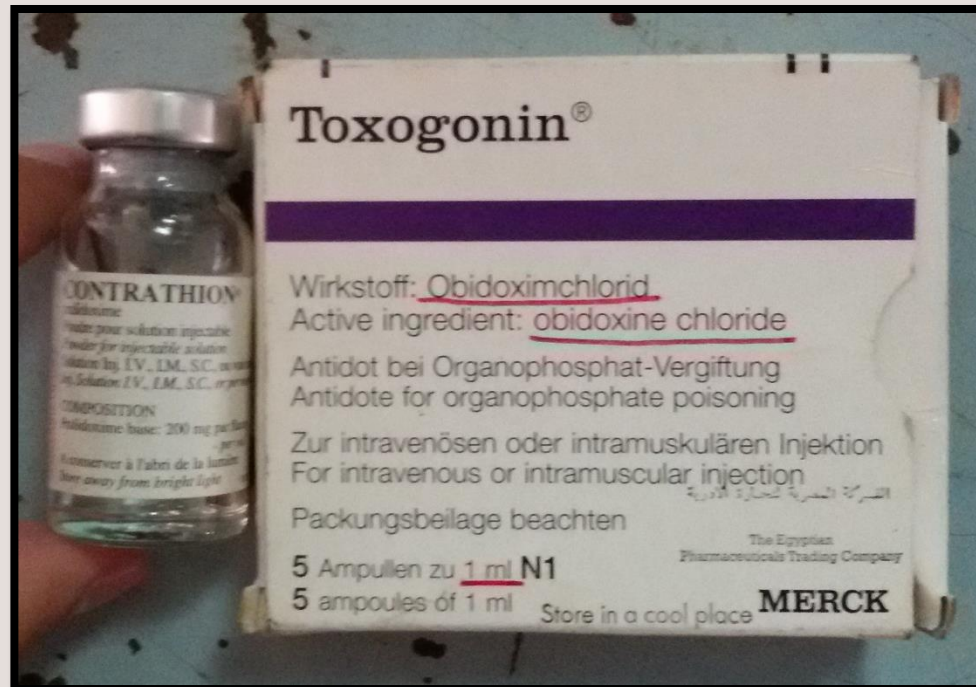
Specific Antidote	
Cholinesterase Enzyme Inhibitor Insecticide	• Atropine • Oximes (Pralidoxime-Obidoxime(Toxogonine))
Opioid	Naloxone(Narcan)
Paracetamol (acetaminophen)	N-Acetyl Cysteine (Mycomyst)
Benzodiazepine	Flumazenil (Anexate)
Antipsychotic	Benzotropine Mesylate (Cogentin)

ANTIDOTE OF CHOLINESTERASE ENZYME INHIBITOR INSECTICIDE



Atropine

ANTIDOTE OF CHOLINESTERASE ENZYME INHIBITOR INSECTICIDE



ANTIDOTE OF OPIOID



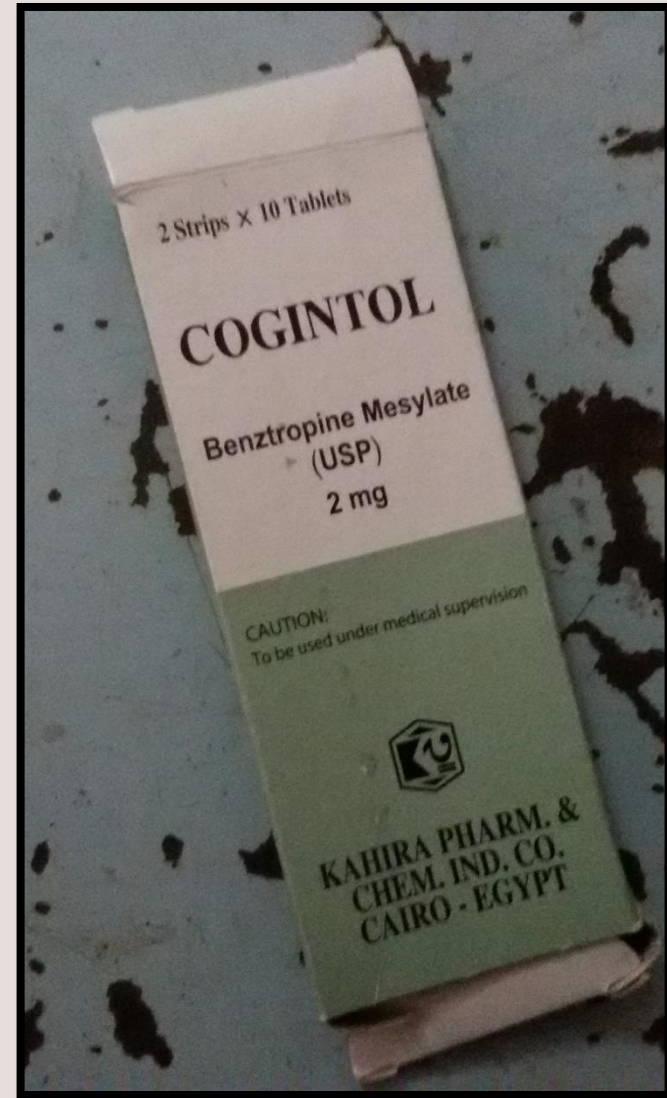
ANTIDOTE OF PARACETAMOL



ANTIDOTE OF ANTI-ANXIETY (BENZODIAZEPINE)



ANTIDOTE OF ANTI PSYCHOTIC





Never give UP !
Ahmed M. Solymman